

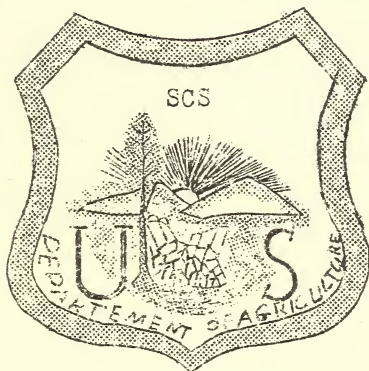
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SEP 27 1937

THE TAR-HEEL WASH OFF

MAY - 1937



UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

DEEP RIVER AREA

HIGH POINT, NORTH CAROLINA



U. S. DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.

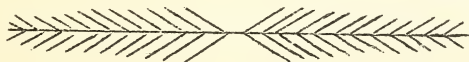
FORE ORD

The Soil Conservation Service employs the same methods for the control of erosion that County Agents have used for many years. As rotations were in vogue a half a century ago, so are rotations in vogue today; as vegetation controlled erosion when grandfather farmed, so vegetation will control erosion today; as County Agents advocated contour tillage a generation ago, so does the Soil Conservation Service advocate contour tillage today. There is nothing new or startling about the erosion control practices or the land-use policies employed by the Soil Conservation Service.

It is clear that the presence of the Soil Conservation Service need not always be necessary in the Deep River area. When that time comes, it is hoped that the cooperators themselves will carry on the program as well as, and even better than it is now being carried on. It can be done. This means careful planning on the part of each and every cooperator; planning the rotations; planning to save seed; planning land-use policies to meet changing conditions. In all your planning, however, it is hoped that the fertility of the soil will be a major objective. We are merely stewards of what we possess. Let us be good stewards.

MOISTURE CONSERVATION

The most important factor in erosion control, is keeping rain water on the land where it falls. The Soil Conservation Service has developed and perfected many methods just for that purpose. One way to keep water on the land is to keep the soil covered with vegetation; another way is to plant crops in rows that run on the contour instead of up and down the slopes. Still other methods are to use diversion ditches to keep water out of gullies; plant gullies to trees, shrubs and other soil binding vegetation; use terraces on sloping fields; take out of cultivation slopes so steep that even good farming methods cannot keep the soil and water from rushing off the land. There are a lot of other soil and water conserving measures. The farmers who apply them keep their soil from washing away and conserve moisture for the use of growing crops. To farmers who are not already following conservation practices, it is suggested that they visit the nearest demonstration area of the Service. Project men will be glad to explain the program.



CROP ROTATIONS

Crops should be grown in rotation and this is doubly important on land that has any appreciable slope.

By crop rotation is meant, in general, the growing of different kinds of crops in recurring succession on the same land. In more specific terms, a proper rotation may be defined as a system of cropping in which the right combination of row crops, small grain and grass or leguminous crops is grown in the proper order and in recurring succession on the same land.

Some of the advantages of rotation are, the addition of organic matter by turning into the soil legumes and other crops. This addition of organic matter will provide more moisture for crops in dry years and will help get rid of excess moisture in wet years. It will aid in the control of erosion on hilly and sloping land, and make all lands easier to till.

The growing of legumes helps to add large quantities of nitrogen to the soil. This nitrogen, which the legume has gathered from the air, reduces the quantity of commercial nitrogen necessary for the crops, thus reducing the fertilizer bill.

Rotations provide for a more balanced removal of plant foods from the soil, and also provide for the alternation of deep-rooted and shallow-rooted crops which permits plant food to be taken from different depths in the soil. Weeds are more easily kept down, and plant diseases and harmful insects are more easily controlled. It is easier to grow a diversification of crops with a rotation than without one.

Labor for breaking, seed bed preparation, planting, and harvesting of crops is

distributed more evenly throughout the year.

The general management of the farm is made easier. The farmer knows what crops he is going to plant and where they are to be planted. He can also better determine his seed and fertilizer requirements ahead of time.

FACTORS DETERMINING ROTATIONS

Factors like soil type, kind of crop, lay of the land and economic conditions compel variations in the use of soil improvement materials and in rotations.

Uniformity of soil, as regards kind or producing power, is the unusual rather than the average condition that prevails. A rotation best suited to a field of low-producing, sandy soil is hardly suited to a highly productive silt loam. A hillside field subject to soil washing calls for a different management as regards rotation, than a flat area. It is often easier to vary a rotation to suit the fields than to alter the fields to suit the rotation.

A good rotation is a means to an end and the cropping problem resolves itself into two parts: (1) The growing of the desired crops in rotations best suited to the soil and crop conditions; and (2) the management of the rotations in such a way as to enable the farmer to realize annually the required acreage of each crop he desires.

LEGUMES IMPORTANT FOR SOIL IMPROVEMENT AND EROSION CONTROL

Now that farmers have seeded all the lespedeza they plan to grow this year, cowpeas, soybeans, velvet beans and other legumes become important as green manure crops and for soil improvement and erosion control.

Most of the legumes whose roots contain bacteria, which take nitrogen from the air and store it in a form available for plants, will grow on almost all types of soil. The lespedezas do best, however, on the heavier soils, while cowpeas and soybeans thrive best on sandy loam soils.

In a few weeks it will be time to seed cowpeas, soybeans and velvet beans. The soy and velvet beans should be planted a few weeks after corn is planted, and cowpeas should be planted during the last week in May and on through June.

When the legumes are turned under as green manure, they not only add nitrogen to the soil, but also provide organic matter which aids materially in the conservation of soil and moisture.

Summer green manure crops should be followed by winter cover crops such as vetch, Austrian winter peas and crimson clover. All green manure crops should be well mixed with the soil, which will assist in conserving water, and will decompose the vegetable matter in such a way that more plant food elements will be available for the next crop.

CONTOUR TILLAGE

Contour tillage is an important factor in the conservation of soil and water on clean-tilled areas regardless of whether or not the land is terraced.

By contour tillage is meant the practice of running the rows across the principal slope or as nearly on the level as possible. The fact that the field is terraced, approved rotations are followed and row crops occur only once in three or four years, does not lessen the importance of contour tillage.

Breaking, disking and harrowing of the land, the drilling of small grain, - in fact all manner of land cultivation - should include the principle of contour tillage. That is, all farming operations should be on the contour instead of up and down the slope.

Disking and drilling tend to pulverize a thin layer of the topsoil which is readily washed off the field unless precautions are taken to hold it. By cultivating the land across the slope, the rows form miniature terraces that hold and absorb the rain water. The moisture thus retained reduces erosion and increases crop yields.

On the other hand, if the rows are run up and down the hill, the result will be the loss of valuable topsoil, the filling up of terrace channels with sand and silt deposits, over-topping of terraces, damage to fields and crops below and the rapid wearing out of the land.

PLANTING CRITICAL AREAS

The planting of perennial, close-growing vegetation on critical areas in a cultivated field, will often protect a large portion of the field.

A critical area may occur as a steep portion of a field between more gentle slopes above and below, or, as a galled spot where, due to some unusual condition, erosion has become particularly severe and is progressing at a more rapid rate than on other portions of the field.

Where these areas occur as a sudden break in the topography of the field, a band of perennial vegetation extending across this steeper portion tends to slow up run-off water and thus reduces the damage to the lower portions of the field. Perennial cover on galled spots aids in preventing these areas from spreading.

The use of legumes for such plantings increases the fertility of the soil, and mixtures of clovers, lespedezas and grasses used on such areas, will not only control erosion, but will provide a profitable hay crop. In this case no land is wasted, and the entire area is actually put to more profitable use than if row crops are used.

If this area is not needed for hay, then legumes, grasses, and other plants that will improve the soil and provide food and cover for wildlife may be used.

TERRACE OUTLET CHANNEL MAINTENANCE

As summer approaches, we enter the season of sudden heavy rain storms. These rains, falling on a field well covered with clover, alfalfa, lespedeza or thick-growing grasses, will do no serious damage to the soil that supports these plants. On the other hand, when the field has no protective cover, as is the case when the land is in clean-tilled crops, lashing rains will take a heavy toll of topsoil.

There is some movement of soil on most fields, even those that are terraced. Water moves the soil into the terrace flow line and on out into the terrace outlet channel, the construction of which, in many cases, has been necessary to lead the water safely to a flat grade or branch. If this channel has the protection of a good growing sod, then the water will travel to its safe level without doing any damage.

Experience has shown that muddy water flowing through tall-growing grasses, will be slowed up to the extent that it will drop its load of silt. This process happening several times during the summer may so fill up a channel with mud that the water will be forced out of the outlet channel over the field.

Since the movement of soil cannot be entirely prevented on land in row crops, some provision must be made to keep from filling up the grass-covered terrace outlet channels. The most effective method is the proper maintenance in the outlet channel of a good growth of grass, which should be kept short by mowing or grazing in dry weather. This causes the grass to form a dense sod which prevents erosion but does not strain out all of the mud.

HIGH SCHOOL STUDENTS MAKE FIELD TOUR

A field demonstration tour was recently conducted through the Deep River area for the benefit of the vocational agricultural class of Nathaniel Green High School, located in the eastern section of Guilford County.

Sixty-seven boys, ranging from 14 to 18 years of age, were taken on the trip. Mr. C. C. Abernathy, Associate Soil Conservationist, and Mr. E. H. Forest, Junior Agronomist, both from the High Point offices of the Soil Conservation Service had charge of the tour. They were accompanied by Mr. C. A. Redmond, Vocational Agricultural Instructor at Nathaniel Green School.

The day was given over to visiting a number of farms, among which were those of J. E. Millis, Mrs. Nora Cox, C. B. Shackelford, R. C. Royals, Paul Swiggett, J. C. Collett, Blair's Dairy farm, and Bundy's Dairy Farm. The various phases of the work being carried on in the area by the soil conservation service were inspected and explained to the class. These included strip cropping, crop rotation, contour tillage, contour furrowing, sub-soiling, land retirement, terracing, woodland management, wildlife development, and gully control. The High Point Municipal Lake was also visited, and the methods of shore planting for prevention of silting were pointed out and explained to the students.

It was gratifying to note the lively interest manifested by the boys in every phase of the operations. They asked many questions concerning the work and apparently derived a great deal of benefit from the trip.

FORESTRY

The tree planting season has closed and farmers are busy with the plowing and planting of crops. The most important factor in forestry work at this time is the protection of the plants that have been set out.

Fire is an ever-present menace, but at this season of the year, green grasses and forest foliage have put forth to the extent that the danger of fire is not so great as in the early spring or late fall, except in the case of an extremely dry season.

It is also important that areas planted to trees be protected from grazing. While livestock should not be allowed to range on forest land at any time, it is especially important that stock be excluded from areas on which young seedlings have been planted. Cattle, goats and hogs will destroy the seedlings by cropping or rooting them out. Therefore, time and labor devoted to planting is wasted unless the young trees are protected from destruction by livestock.





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SOIL CONSERVATION SERVICE
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